

## Electronic Acknowledgement Receipt

<b>EFS ID:</b>	6488339
<b>Application Number:</b>	10801208
<b>International Application Number:</b>	
<b>Confirmation Number:</b>	2034
<b>Title of Invention:</b>	Methods of manufacturing semiconductor devices having a ruthenium layer via automatic layer deposition
<b>First Named Inventor/Applicant Name:</b>	Kwang-hee Lee
<b>Customer Number:</b>	20792
<b>Filer:</b>	D. Randal Ayers/Jessica French
<b>Filer Authorized By:</b>	D. Randal Ayers
<b>Attorney Docket Number:</b>	5649-1277
<b>Receipt Date:</b>	19-NOV-2009
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<b>Application Type:</b>	Utility under 35 USC 111(a)

### Payment information:

Submitted with Payment	yes
Payment Type	Deposit Account
Payment was successfully received in RAM	\$ 180
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### File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
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1		5649_1277_IDS.pdf	288298 6465df3852dc10bc66622e51fe29ae0e55137dbb	yes	3
	<b>Multipart Description/PDF files in .zip description</b>				
	<b>Document Description</b>		<b>Start</b>	<b>End</b>	
	Transmittal Letter		1	2	
	Information Disclosure Statement (IDS) Filed (SB/08)		3	3	
<b>Warnings:</b>					
<b>Information:</b>					
2	NPL Documents	OA_US_Application_11616406.pdf	585937 f7609104d98be35bb47388312e2fae8298b49475	no	16
<b>Warnings:</b>					
<b>Information:</b>					
3	Fee Worksheet (PTO-875)	fee-info.pdf	30019 fce9a24ec528f0920eb22f013a130dfde94dd544	no	2
<b>Warnings:</b>					
<b>Information:</b>					
<b>Total Files Size (in bytes):</b>			904254		
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